ABSTRACT OF THE DISCLOSURE
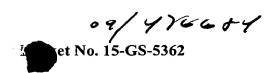
A technique for enhancing discrete pixel images includes blurring or smoothing image data, and identifying structural features based upon the blurred image data. Identification of structural pixels is based upon a scaling factor which may be adjusted by an operator, providing an image enhancement framework which may be easily adapted to various types of images and image acquisition systems. Orientation smoothing of the structure may include dominant orientation smoothing based upon both a dominant orientation for each structural pixel, as well as the orientation orthogonal to the dominant orientation. Orientation sharpening is performed based upon whether structural pixel values exceed a desired threshold. The resulting technique is versatile and provides improved robustness to noise, while offering excellent enhancement of structure of interest in the reconstructed image without loss of texture.

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